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GHANA SCORE: ETHNIC DIFFERENCES IN CARDIOMETABOLIC RISK, CONTRASTS AMONG AFRICAN-AMERICANS, CAUCASIANS AND GHANAIAANS

ACC Poster Contributions

Ernest N. Morial Convention Center, Hall F

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Session Title: Risk Reduction and Rehabilitation: Special Populations

Abstract Category: 17. Risk Reduction and Rehabilitation

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Background: African-Americans (AA) have increased cardiovascular disease (CVD) risk compared to Caucasians (CC). Insight into the mechanisms for this disparity may be gained by investigating CVD and CVD risk factors in those of African descent. Although CVD is the leading cause of death worldwide, it has been traditionally understudied in Sub-Saharan Africans, thus likely underestimating CVD risk in this group. Accordingly, we compared CVD risk factors in cohorts of West Africans to AA and CC from Pennsylvania (PA).

Methods: 206 adults (125 rural, and 81 urban), from the Ashanti region of Ghana, without a history of CVD (MI, CVA, PAD) underwent anthropometric measurements and testing of fasting glucose and lipids. Data were compared to similar measurements obtained from 596 CC and 546 AA participants in the ongoing HeartSCORE (Heart Strategies Concentrating on Risk Evaluation) study in Allegheny County, PA.

Results: There are significant differences in BMI, BP, lipids, and fasting glucose across the studied ethnic and racial groups (Table).

Conclusions: Compared with CC and AA, Ghanaian ethnicity was associated with more favorable BP, BMI, FG, TC, LDL-C, and TG, but lower HDL-C. Urbanization in Ghanaians was associated with increased BMI, lipid and glucose levels in a pattern similar to AA. These results suggest that CVD and CVD risk are influenced by factors other than ancestry. Further study is needed to assess the clinical implications of the observed differences.

| RG = Rural Ghanaians; UG = Urban Ghanaians | | | | | |
|--|-------|-------|-------|-------|---------|
| | RG | UG | AA | CC | p Value |
| BMI | 27.6 | 30.2 | 32.3 | 28.9 | <0.0001 |
| SBP | 123.5 | 123.3 | 138.0 | 129.7 | <0.0001 |
| DBP | 74.8 | 79.4 | 83.4 | 79.1 | <0.0001 |
| TC | 145.6 | 185.7 | 204.3 | 212.6 | <0.0001 |
| LDL-C | 96.5 | 134.2 | 138.5 | 147.3 | <0.0001 |
| HDL-C | 35.6 | 39.4 | 55.6 | 54.5 | <0.0001 |
| TG | 84.2 | 86.0 | 108.3 | 134.0 | <0.0001 |
| FG | 74.3 | 83.9 | 102.5 | 94.3 | <0.0001 |